Exhibit 33-2

State of California ex rel. Ven-A-Care of the Florida Keys, Inc. v. Abbott Labs, Inc. et al., Civil Action No. 03-11226-PBS

Exhibit to the November 25, 2009 Declaration of Philip D. Robben in Support of Defendants' Joint Motion for Partial Summary Judgment

Analysis and Findings

The dispensing costs for all pharmacies in the sample are summarized in the tables and paragraphs following. Findings for all pharmacies in the sample are presented collectively, and additionally are presented for subsets of the sample based on pharmacy characteristics. There are several statistical measurements that may be used to express the central tendency of a distribution, the most common of which are the average, or mean, and the median (see sidebar). Findings are presented in the forms of means and medians, both raw and weighted.

In many real world settings such as this dispensing cost survey, statistical "outliers" are a common occurrence. These outlier pharmacies have dispensing costs that are not typical of the majority of pharmacies.

Different Measures of Central Tendency:

Unweighted mean: the arithmetic average cost for all pharmacies.

Weighted mean: the average cost of all prescriptions dispensed by pharmacies included in the sample, weighted by prescription volume. The resulting number is the average cost for all prescriptions, rather than the average for all pharmacies as in the unweighted mean. This implies that low volume pharmacies have a smaller impact on the weighted average than high volume pharmacies. This approach, in effect, sums all costs in the sample and divides that sum by the total of all prescriptions in the sample. The weighting factor can be either total prescription volume or Medi-Cal prescription volume.

Median: the value that divides a set of observations (such as dispensing cost) in half. In the case of this survey, the median is the dispensing cost such that the cost of one half of the pharmacies in the set are less than or equal to the median and the dispensing costs of the other half are greater than or equal to the median.

Weighted Median: This is determined by finding the pharmacy observation that encompasses the middle value prescription. The implication is that one half of the prescriptions were dispensed at a cost of the weighted median or less, and one half were dispensed at the cost of the weighted median or more.

Suppose, for example, that there were 1,000,000 Medi-Cal prescriptions dispensed by the pharmacies in the sample. If the pharmacies were arrayed in order of dispensing cost, the median weighted by Medi-Cal volume, is the dispensing cost of the pharmacy that dispensed the middle, or 500,000th prescription.

Medians are often preferred to averages (i.e. the arithmetic mean) in situations where the magnitude of outlier values results in an average that does not represent what is thought of as "average" or normal in the common sense. The measurement that is the most ideally suited for determining the typical cost of dispensing prescriptions to Medicaid recipients is the **median weighted by Medi-Cal volume**.

For all pharmacies in the sample, dispensing cost findings are presented in Table 3.2.

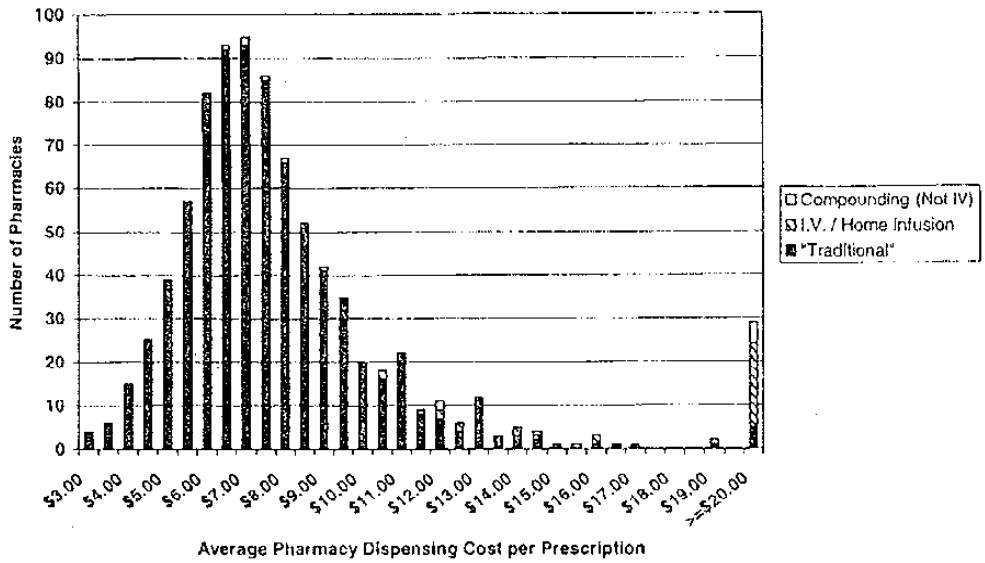
Table 3.2 Cost Per Prescription – All Pharmacies

	Dispensing Cost[1]
Unweighted Average (Mean)	$9.15
Average (Mean) Weighted by Medi-Cal Volume	$8.69
Unweighted Median	$7.53
Median Weighted by Medi-Cal Volume	$7.26

[1] Dispensing Costs have been inflated to the common point of June 30, 2002.

Chart 3.2 is a histogram of the dispensing cost for all pharmacies in the sample. There was a large range between the highest and lowest dispensing cost observed for pharmacies in the sample. The majority of pharmacies (75%), however, had dispensing costs between $5 and $10.

Chart 3.2 Dispensing Cost by Pharmacy



The two most significant characteristics that affected pharmacy dispensing cost were the provision of intravenous (I.V.) or home infusion solutions and the provision of pharmaceutical compounding services. Our analysis revealed significantly higher cost of dispensing associated with the 49 pharmacies in the sample that provided significant levels of these services.

In every pharmacy dispensing study where information on intravenous solution and home infusion dispensing activity has been collected by Myers and Stauffer,

such activity has been found to be associated with higher dispensing costs. Discussions with pharmacists providing I.V. solutions indicate that the activities and costs involved in filling I.V. prescriptions are significantly different from the costs incurred by the typical retail (or long term care) pharmacy. The reasons for this difference include:

- Costs of special equipment for mixing and storage of I.V. solutions.
- Higher direct labor costs because most I.V. prescriptions must be mixed in the pharmacy, whereas the manual activities to fill a non-I.V. prescription are mainly limited to counting pills (or vials, etc.) and printing and affixing the label.
- A pharmacy may mix and deliver many "dispensings" of a daily I.V. solution from a single prescription, thus incurring additional costs spread over a smaller number of prescriptions.

This latter factor, in particular, can have a dramatic impact on increasing a pharmacy's apparent cost per prescription.

Similar to the dispensing of I.V. prescriptions, the provision of complex pharmaceutical compounding services was also observed to be associated with significantly higher cost.

The differences in dispensing costs which were observed for providers of I.V. or compounding services compared to those pharmacies that did not offer these services are summarized in Table 3.3.

Table 3.3 Cost Per Prescription - I.V. / Compounding Pharmacies Versus other Pharmacies

Type of Pharmacy	Number of Pharmacies	Unweighted Average (Mean) Cost[1]	Standard Deviation
Pharmacies Dispensing I.V. / Home Infusion Prescriptions	34	$32.97	$23.23
Pharmacies Dispensing Compounded Prescriptions (but not I.V. Rxs)	15	$23.30	$22.77
Pharmacies Not Dispensing I.V. or Compounded Prescriptions	798	$7.87	$2.88

[1] Dispensing Costs have been inflated to the common point of June 30, 2002.

Myers and Stauffer LC
Certified Public Accountants

Based on this analysis and analyses performed in other studies, pharmacies that dispense I.V. or compounded prescriptions as a significant part of their business can have dispensing costs far in excess of those found in a traditional pharmacy. Based on our cost findings, it must be concluded that the costs incurred to dispense I.V. or compounded prescriptions are not representative of the costs incurred by a general pharmacy. If the costs of I.V. and compounding services were to be included in the computation of an average or median dispensing cost that was then used to establish a reimbursement rate, the effect would be to pay approximately 95% of pharmacies an additional allowance for a service they never provided. And, for those pharmacies providing I.V. services, the marginal increase in the fee would be immaterial in relation to the cost of actually dispensing an I.V. or compounded prescription.[12]

Consequently, many of the analyses that follow exclude providers that had dispensed a significant volume of I.V. or compounded prescriptions. Table 3.4 restates the measurements noted in Table 3.2 excluding pharmacies that dispensed significant volumes of I.V. or compounded prescriptions.

Additional comments regarding pharmacies that dispense I.V. or compounded prescriptions is included in Appendix D.

Table 3.4 Cost Per Prescription – Excluding I.V. and Compounding Pharmacies

	Dispensing Cost[1]
Unweighted Average (Mean)	$7.87
Average (Mean) Weighted by Medi-Cal Volume	$7.21
Unweighted Median	$7.40
Median Weighted by Medi-Cal Volume	**$6.95**

[1] Dispensing Costs have been inflated to the common point of June 30, 2002.

Analysis of Pharmacy Characteristics

Responding pharmacies were categorized into various groups of interest and their dispensing costs analyzed to determine statistical significance. These characteristics include:

- Total prescription volume
- Chain versus independent pharmacy affiliation
- Urban versus rural pharmacy location
- Total Medi-Cal volume

[12] Although typical dispensing fees reimburse less than the dispensing costs of I.V. pharmacies, they are generally able to break even based on the margin allowed on ingredient cost reimbursement. Compounding pharmacies predominantly market their services to self-pay customers and do not solicit Med-Cal reimbursement for most compounding services.

- Medi-Cal volume as a percent of total volume
- Provision of unit dose dispensing services
- Provision of prescription drugs to residents of long-term care facilities

One way to determine the statistical significance of differences in dispensing cost between the pharmacies classified by the above referenced characteristics is through the use of a *t*-test. The sample data may show that a certain group of pharmacies has a sample mean lower or higher than another group. Recognizing that the data only represents a sample, a *t*-test is a statistical technique that seeks to determine if the findings are strong enough that a similar relationship can be expected to exist for the entire population. The *t*-test takes into consideration the sample's size, mean, and underlying variance. Although the preference of using a weighted median as a measurement of central tendency was previously explained, a *t*-test requires the comparison of the *unweighted average (mean)* costs.

Exhibit 15 provides additional statistical measures including the standard error of the mean and confidence intervals. Confidence intervals given in Exhibit 15 were calculated using appropriate statistics from the *t* distribution at the 90% and 95% confidence levels. These intervals are a range estimate for the population mean, and are based upon the sample mean, standard deviation, and sample size. A 95% confidence interval identifies the range which one would expect the mean from *any* sample to fall 95% of the time. It can be inferred that there is approximately a 95% probability that the population mean lies within the range of the confidence interval.

All costs referred to in these analyses have been inflation adjusted to the common point of June 30, 2002.

1) Total Prescription Volume

Pharmacies were classified into meaningful groups based upon their differences in total prescription volume. Dispensing costs were then analyzed based upon these volume classifications.

Table 3.5 Pharmacy Total Annual Prescription Volume

Total Annual Prescription Volume of Pharmacy	Number of Stores	Unweighted Average (Mean) Cost	Standard Deviation of Cost
0 to 29,999	170	$10.02	$4.59
30,000 to 59,999	256	$7.83	$2.24
60,000 and Higher	372	$6.92	$1.33

There is a significant correlation between a pharmacy's total prescription volume and the dispensing cost per prescription. For all categories noted above differences in the average (mean) dispensing cost were statistically significant (at the 5% level of significance). This result is not surprising because many of the costs associated with any business, including the dispensing of prescriptions, are fixed in nature, and do not vary significantly with increased volume. For stores with a higher total prescription volume, these fixed costs are spread over a greater number of prescriptions resulting in lower costs per prescription. (A more detailed analysis of cost variations attributable to total prescription volume using statistical regression techniques is presented later in the report.)

2) Chain Versus Independent Pharmacy Affiliation

Of the 798 pharmacies that did not dispense a significant volume of I.V. or compounded prescriptions, 339 were independent pharmacies and 459 were chain pharmacies.

Table 3.6 Chain Versus Independent Pharmacies

Type of Pharmacy	Number of Stores	Unweighted Average (Mean) Cost	Standard Deviation of Cost	Average Annual Total Prescription Volume
Independent	339	$7.67	$3.46	49,769
Chain	459	$8.02	$2.35	98,438

The use of a *t*-test indicates that the difference in the unweighted averages (means) is not statistically significant (at the 5% level of significance).

Also noted in Table 3.6 is the average prescription volume for independent and chain pharmacies. It is noteworthy that the average volume of chain pharmacies in the sample is over 98% greater than the average volume observed for independent pharmacies.

Previously it was noted that the total number of pharmacies used in this analysis of dispensing costs was slightly biased towards the inclusion of chain pharmacies. Due to a lack of any significant differential in dispensing cost between chain and independent pharmacies, no adjustment to compensate for the reported bias is necessary.

3) Urban Versus Rural Pharmacy Location

Myers and Stauffer used the zip code of each pharmacy to determine if it was located in a Metropolitan Statistical Area (MSA) as used by CMS. Those in an MSA were considered to be urban, and those not in an MSA were considered rural.

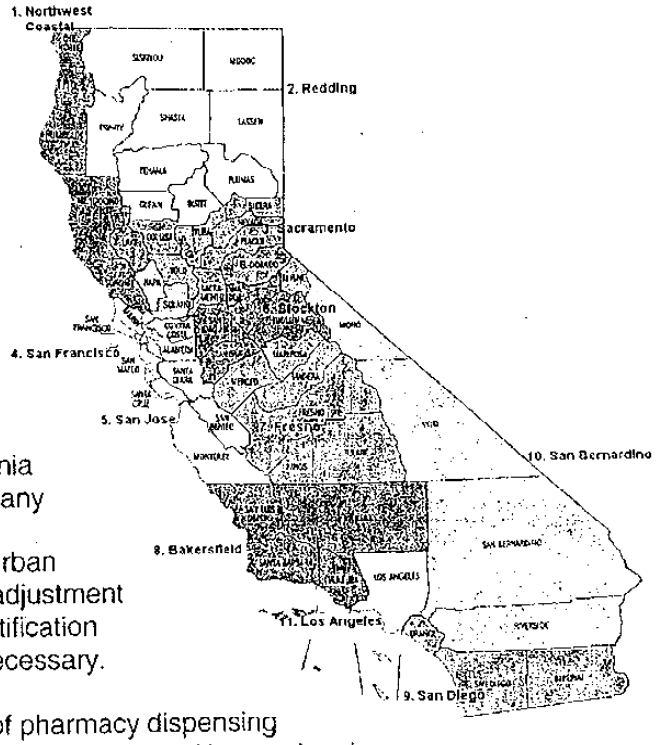
Table 3.7 Urban Versus Rural Pharmacy Location

Location of Pharmacy	Number of Stores	Unweighted Average (Mean) Cost	Standard Deviation of Cost
Urban	720	$7.89	$2.96
Rural	78	$7.71	$1.95

The use of a *t*-test indicates that the difference in the unweighted averages (means) is **not** statistically significant (at the 5% level of significance).

Previously it was noted that the process of selecting pharmacies into the sample to be surveyed included some stratification protocols to ensure adequate representation of pharmacies in rural California counties. Due to a lack of any significant differential in dispensing cost between urban and rural pharmacies, no adjustment to compensate for the stratification protocols appears to be necessary.

Chart 3.3 California Regions Used for Dispensing Cost Analysis



As an additional analysis of pharmacy dispensing cost by location, pharmacies were grouped into regional classifications (see Table 3.8 and Chart 3.3).

Myers and Stauffer LC
Certified Public Accountants

Table 3.8 Dispensing Costs by Region

Location of Pharmacy (Region)	Number of Stores	Unweighted Average (Mean) Cost	Standard Deviation of Cost	Average Annual Total Prescription Volume
1. Northwest Coastal	40	$7.79	$1.78	74,711
2. Redding	31	$8.43	$2.33	55,595
3. Sacramento	63	$7.68	$2.31	97,577
4. San Francisco	123	$7.89	$2.11	102,086
5. San Jose	62	$8.45	$3.41	85,063
6. Stockton	36	$7.38	$1.66	79,551
7. Fresno	42	$6.81	$1.56	71,434
8. Bakersfield	36	$7.58	$2.28	75,869
9. San Diego	111	$7.69	$1.90	76,857
10. San Bernardino	61	$8.40	$2.66	68,062
11. Los Angeles	193	$7.98	$4.22	62,626

Several of the differences observed in the regional breakdown of dispensing cost were statistically significant (at the 5% level of significance). It is noted that there is some variation in the average total prescription volume between the various regions.

4) Medi-Cal Prescription Volume

Pharmacies were also classified based upon their Medi-Cal prescription volume. Medi-Cal volume was supplied to Myers and Stauffer by the Department of Health Services.

Table 3.9 Pharmacy Annual Medi-Cal Prescription Volume

Annual Medi-Cal Prescription Volume of Pharmacy	Number of Stores	Unweighted Average (Mean) Cost	Standard Deviation of Cost
0 to 1,999	183	$8.68	$4.50
2,000 to 10,000	331	$8.05	$2.27
10,000 and Higher	284	$7.13	$1.82

For the classifications shown, some differences in the average (mean) dispensing cost were found to be statistically significant (at the 5% level of significance). It should be noted, however, that there is a correlation between Medi-Cal volume and total prescription volume. The relationship noted with regard to Medi-Cal volume, is a function of total prescription volume rather than Medi-Cal volume alone.

5) Medi-Cal Prescription Volume as a Percent of Total Prescription Volume

A better measure of the effect of a provider's Medi-Cal volume was to use Medi-Cal volume as a percent of total volume. To facilitate this analysis, pharmacies were arrayed into meaningful classifications of Medi-Cal utilization.

Table 3.10 Pharmacy Medi-Cal Utilization Ratio

Medi-Cal Prescription Volume as a Percent of Total Volume	Number of Stores	Unweighted Average (Mean) Cost	Standard Deviation of Cost
0.0% to 9.9%	380	$7.93	$2.51
10.0% to 24.9%	198	$7.89	$2.21
25.0% and Higher	220	$7.75	$3.85

The differences in the sample averages (means) shown in Table 3.10 were **not** statistically significant (at the 5% level of significance).

Anecdotally, pharmacists have reported that high labor input is required to meet the requirements of dispensing Medi-Cal prescriptions. For example, the process of securing TAR approval was commonly mentioned as being time intensive. Although there are obviously costs associated with this type of activity, the survey data does not show any systemically higher costs associated with pharmacies that dispense higher percentages of Medi-Cal prescriptions.

6) Provision of Unit Dose Dispensing Services

Pharmacies were classified by whether or not they provided prescription drugs in unit dose packaging.

Table 3.11 Provision of Unit Dose Prescription Services

Type of Pharmacy	Number of Stores	Unweighted Average (Mean) Cost	Standard Deviation of Cost
Provides Unit Dose Services	108	$7.81	$2.25
Does Not Provide Unit Dose Services	690	$7.88	$2.97

The differences in the unweighted sample averages (means) observed here were **not** statistically significant (at the 5% level of significance).

7) Retail Versus Institutional Pharmacies

Pharmacies were classified by whether or not they provided a significant number of prescriptions to residents of long-term care facilities (based on analysis of Medi-Cal claims history).

Table 3.12 Retail Versus Institutional Pharmacies

Type of Pharmacy	Number of Stores	Unweighted Average (Mean) Cost	Standard Deviation of Cost
Retail	785	$7.86	$2.89
Institutional	13	$8.59	$2.15

Despite the apparent differences in mean dispensing cost, the differences in the unweighted sample averages (means) observed here were **not** statistically significant (at the 5% level of significance). Additional comments regarding institutional pharmacies are included in Appendix D.

Multivariate Analysis

The analyses described above tested for significant differences in cost by analyzing one pharmacy attribute at a time. A more sophisticated method to analyze the impact of pharmacy characteristics upon dispensing cost is to use a multivariate regression analysis. In such an analysis, it is possible to control for factors known to affect dispensing cost, such as total prescription volume, and determine if other factors have a significant impact on dispensing cost. It is possible for an attribute to not be statistically significant in a *t*-test, but still be shown to have some effect on dispensing cost in a multivariate analysis (or vice versa).

Several analyses were conducted to identify potential correlation between pharmacy dispensing cost and certain pharmacy traits. These analyses used a multivariate stepwise linear regression technique. Using this approach, it is possible to control for factors known to affect dispensing cost, and at the same time test for the significance of any effect on dispensing cost caused by other traits. This approach allows for a more robust analysis of the potential influence of pharmacy characteristics on dispensing cost than can be achieved by *t*-tests alone. The traits that were used in the analysis included:

- Prescription sales volume
- Type of location
- Type of affiliation
- Type of ownership
- Unit dose delivery systems
- Delivery service
- Level and percent of Medi-Cal volume
- Total prescription volume
- Pharmacy building ownership

- Geographic location
- Provision of intravenous prescription dispensing services
- Provision of compounding services
- Hours open
- Length of operation at location
- Percent of prescriptions dispensed paid by third party payers
- Percent of prescriptions dispensed to residents of long-term care facilities
- Percent of prescriptions dispensed to residents of board and care facilities

The attributes which proved to be the most significant were:

- Total prescription volume
- Provision of I.V. services
- Provision of compounding services

The relationship between total prescription volume and dispensing cost was especially pronounced. A linear model to predict total prescription dispensing costs based on prescription volume alone was able to explain over 80% of the variation in dispensing costs. Linear regression methods indicate that the regression equation which best describes the relationship of total prescription volume and total dispensing cost is:

Total Costs (inflated)= $ 92,785 + $5.85x (Total Prescription Volume)[13]

Chart 3.4 Relationship Between Total Costs and Total Prescription Volume

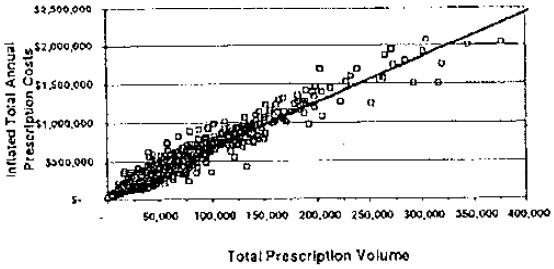
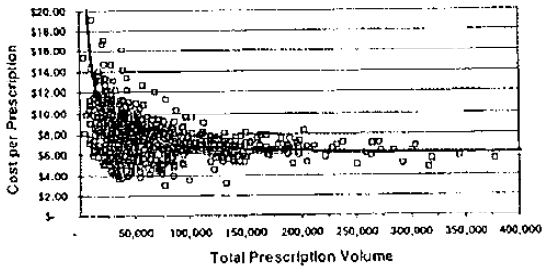


Chart 3.5 Relationship Between Cost per Prescription and Total Prescription Volume



[13] Excludes pharmacies which dispense a significant volume of I.V., home infusion or compounded prescriptions. The regression equation shown above was produced using an iterative regression technique that excluded some statistical outliers which would have had the effect of distorting the regression equation.

Myers and Stauffer LC
Certified Public Accountants

This result implies that there are fixed costs of $92,785 and variable costs of $5.85 per prescription associated with the "typical" pharmacy. The average total prescription volume for pharmacies was approximately 77,800. For such a pharmacy, total prescription costs predicted by the equation are approximately $529,000, or $7.04 per prescription. Clearly, for pharmacies with a high total prescription volume, fixed costs per prescription decrease. Conversely, low volume pharmacies have greater fixed costs per prescription (see Charts 3.4 and 3.5).

No other attribute contributed more than 2% to the predictive power of the linear regression techniques after controlling for the variation of total prescription volume.

Components of Cost

The dispensing costs of the surveyed pharmacies were broken down into the various components of overhead and labor related costs. More information on this subject is included in Appendix B.

Comparison to Other Dispensing Cost Surveys and Economic Analysis

Myers and Stauffer has conducted several surveys of dispensing cost in other states in recent years. Data from the California and other surveys were compared to ascertain the similarities and differences in pharmacy dispensing cost in the state of California as compared to other states. Of particular interest was the dramatic difference in the level of labor related costs that were observed.

There has been some widespread reporting in the profession regarding a pharmacist "shortage" and there is considerable discussion of this trend in industry literature[14]. This shortage has apparently been caused by the recent increase in overall prescription volume nationwide, rapid growth of retail pharmacy outlets, and a decline in pharmacy school graduation rates.

It would appear that the tight pharmacist labor market has had a very pronounced impact on pharmacist salaries in California. Most of the difference in dispensing cost as compared to other states that were surveyed, on a per prescription basis, can be attributed to higher labor cost, though some higher overhead costs were also observed.

Recent experience with pharmacist salary survey data in other states indicates salary and benefit increases in the range of 15% to 20% over the last several

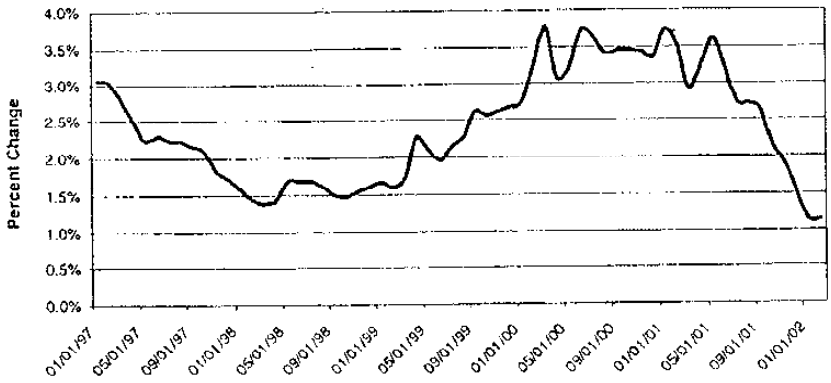
[14] Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, "Report to Congress. The Pharmacist Workforce: A Study of Supply and Demand for Pharmacists." December 2000.

years. In contrast, the change in overhead costs in recent years has been minimal. In part, this is because increases in overhead costs have been restrained due to cost containment pressures exerted by some commercial insurance and managed care entities. Additionally, modest increases in overhead cost have been somewhat mitigated by recent increases in pharmacy prescription volume and the enhanced efficiency that is typically a by-product of higher prescription volume.

The current survey is based on pharmacy fiscal data primarily from calendar year 2000. This corresponds with the period during which general economic trends were resulting in a tight labor market and subsequent wage inflation. During 2001 and 2002, economic trends have changed significantly with strong indications of a recession in progress. There has been a dramatic softening of the labor market that will very likely lead to a slowdown in the rate of increase for wages. It is therefore possible that the rate of increase in labor cost noted in recent years is a unique phenomenon and that rates of increase for labor cost will return to more normal levels in the years ahead.

It is also noted that the overall rate of inflation, as measured by the CPI, has been considerably lower since mid-2001 as compared to the previous 18 months (see Chart 3.6). In a broad economic scope, this peak of inflationary pressures during 2000 and early 2001 was associated with high energy costs and wage inflation resulting from a tight labor market. Although some of this inflationary period occurred after the time period for which pharmacies reported their costs for the current survey, they do have a significant impact on the inflation factors that were used to trend forward the financial data to calendar year 2002.

Chart 3.6
Consumer Price Index (CPI-U)
Percentage Change from Previous 12 Months
Source: Bureau of Labor Statistics



Myers and Stauffer LC

Summary

To summarize, the significant findings from the dispensing cost survey are as follows:

- **The statewide average (median) cost of dispensing, weighted by Medi-Cal volume, was $6.95.**[15]
- No association was found between dispensing cost and the urban or rural location of a pharmacy.
- No association was found between dispensing cost and unit-dose packaging or other measures of long term care dispensing activity; i.e., ambulatory and long term care pharmacies had similar average costs of dispensing.
- No systematically higher costs associated with pharmacies that have a higher percentage of Medi-Cal prescription volume were found.

Table 3.13 Inflation Adjusted Mean Dispensing Cost

Period	Midpoint	Inflation Adjusted [A] Average (Median) [B] Dispensing Cost [C]
Calendar Year 2002	6/30/2002	$6.95
State Fiscal Year 2003	12/31/2002	$7.03
Calendar Year 2003	6/30/2003	$7.12
State Fiscal Year 2004	12/31/2003	$7.21

[A] Inflation factors are based on the CPI, All Urban. Future inflation projections are based on the CPI, All Urban, as published in *Health Care Cost Review, Fourth Quarter 2001* by Standard & Poor's DRI.
[B] Weighted by Medi-Cal prescription volume.
[C] Excludes pharmacies that dispensed a significant amount of intravenous, home infusion or compounded prescriptions.

[15] Excludes pharmacies that dispensed a significant amount of intravenous, home infusion or compounded prescriptions.

Myers and Stauffer LC
Certified Public Accountants

Chapter 4

Prescription Charges Survey

In addition to the actual cost to dispense prescriptions to Medi-Cal recipients, another factor of interest to the Department was the issue of reimbursements paid by other payers of pharmaceuticals. To determine this, a survey of prescription charges was obtained from California pharmacies. This survey enabled an analysis of payments received from cash customers and third party payers other than Medi-Cal.

Methodology

A prescription charges survey was included as an attachment to the dispensing cost survey mailed to each pharmacy (see Exhibit 1). The survey instrument provided for a listing of 50 new prescriptions from one of two survey dates – May 22, 2000, or November 20, 2000. Each pharmacy was asked to list the first 50 new prescriptions filled on or immediately following one of these dates, excluding compounded prescriptions. The survey dates were randomly assigned to each pharmacy so that approximately one-half of the sampled pharmacies was assigned each date. The information requested for each prescription was the prescription number, the name and the strength of the drug, the National Drug Code (NDC) number, the quantity filled, the actual selling price of the prescription, and a code indicating whether the prescription was paid for by a cash-paying customer or a third party reimbursement plan.

The usual and customary survey was utilized for several purposes:

- First, it was used to provide a test of the pharmacy's reported prescription sales and/or number of prescriptions dispensed.
- Second, it was used to determine an estimate of the average prescription reimbursement for each pharmacy. Because prescriptions were marked as being a third party or cash customer, the survey served as a means to estimate the average reimbursement received by pharmacies from these types of customers.

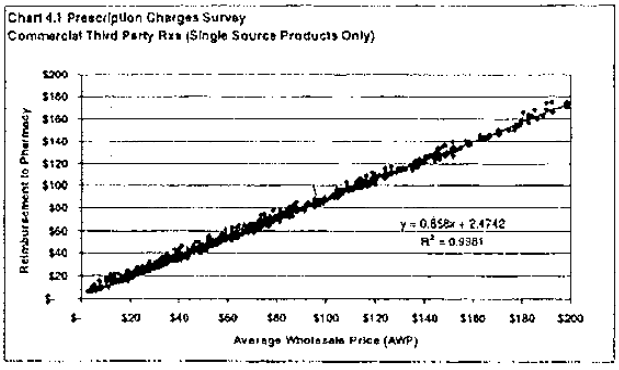
Not all pharmacies filed a usable prescription charge survey; however, a sufficient number of surveys, 552, were available. After data entry and editing, we analyzed the selling price data from approximately 27,000 prescriptions.

Analysis and Findings

Reimbursement Paid by Other Payers

The data in the prescription charges survey made it possible to estimate the reimbursement paid by other third party payers and cash paying customers. In order to derive the typical reimbursement from other payers, we used a bivariate statistical regression technique. This technique allowed us to use the reimbursement reported on the survey, and the known average wholesale price of the drug to estimate both the ingredient and dispensing reimbursement components of other third party payers and cash paying customers.

An example of this technique is shown in Chart 4.1. In this example, commercial third party prescriptions for single source products were priced at the applicable AWP price and subjected to analytical procedures to identify statistical outliers. The ensuing data was plotted using the AWP price and the amount of reimbursement to the pharmacy. A linear regression was performed on the data resulting in the equation of a line that best fits the data points. **The *slope* of the regression line, 0.858, provides an estimate for the average ingredient reimbursement for single source drugs: AWP minus 14.2%. The *y-intercept* of the regression line, $2.47, serves as an estimate for the typical dispensing fee.** As the graph indicates, there is some variability in the actual reimbursement both above and below the regression line. This is measured by the equation's *standard error of the estimate*: $1.70. Results of this example and other subsets of the charge survey data are summarized in Table 4.1.



Myers and Stauffer LC
Certified Public Accountants

Table 4.1 Regression Analysis of Reimbursement by Pharmaceutical Payers for Single Source Drug Products

Payer Type	Number of Prescriptions in the Sample	Estimated Ingredient Reimb. % of AWP	Estimated Dispensing Fee	Standard Error of the Estimate
Cash	539	99%	$8.19	$8.37
Commercial Insurance (i.e. PBM)	2,788	86%	$2.47	$1.70
Medi-Cal Fee-for-Service[1]	1,038	94%	$3.81	$3.60
Medi-Cal Managed Care	188	91%	$2.17	$6.06

[1]Medi-Cal fee-for-service analysis was limited to products without a direct price.

The estimation of Medi-Cal's fee-for-service rates (actual rates for the dates surveyed are $3.80[16] dispensing fee and AWP minus 5% for ingredients) provides confirmation that the bivariate methodology produces meaningful results. Possible explanations for the variation in the estimation of Medi-Cal fee-for-service rates include the application of the lesser of usual and customary charge and possible reporting errors by survey participants.

The survey shows that commercial third party payers are reimbursing pharmacies at substantially lower dispensing and ingredient rates than are currently paid by Medi-Cal. The findings in relation to commercial third parties are consistent with other surveys performed by Myers and Stauffer.

A similar analysis on multi-source products (see Table 4.2) revealed higher variation of reimbursement, particularly for products with an FUL price. Accordingly, estimates of the average reimbursement for these types of products are less conclusive. This can be attributed to the greater variation of actual acquisition cost by item versus the AWP for multi-source products. The data suggests that more varied reimbursement systems (e.g. alternative MAC[17] pricing schedules proprietary to a PBM) are used by third party payers for these products with an FUL price.

[16] The dispensing fee of $4.05 with a negative $0.25 statutory adjustment is effectively $3.80.
[17] "Maximum Allowable Cost"

Table 4.2 Regression Analysis of Reimbursement by Pharmaceutical Payers for Multi-Source Products

Class of Multi-Source Products	Payer Type	Number of Prescriptions in the Sample	Estimated Ingredient Reimb. % of AWP	Estimated Dispensing Fee	Standard Error of the Estimate
No FUL Price	Cash	925	101%	$5.09	$8.45
	Commercial Insurance	1690	86%	$2.36	$2.01
	Medi-Cal FFS[1]	1,187	93%	$3.80	$7.81
	Medi-Cal MCO	320	91%	$3.02	$5.50
Has FUL Price	Cash	701	93%	$6.11	$4.97
	Commercial Insurance	878	86%	$2.01	$2.09
	Medi-Cal FFS[1]	582	79%	$3.80	$5.44
	Medi-Cal MCO	225	78%	$2.82	$5.32

[1]Medi-Cal fee-for-service analysis was limited to products without a direct price.

Other Considerations

Incentive Fees

Myers and Stauffer also considered the possible impact on commercial third party pharmacy payment rates of various management fees or incentives associated with contract formulary compliance or generic substitution. In conjunction with the field visits performed for the dispensing cost survey, Myers and Stauffer accountants interviewed approximately 35 independent pharmacy owners or managers in the state of California during the month of February 2002 regarding incentive payment systems offered by commercial insurers.

Although most of these pharmacists were aware of incentive programs that offered as much as $15 to initiate a therapeutic interchange, pharmacists almost universally declined to participate in these programs. The most often cited reason for declining participation was related to a complaint that such interventions would be too time consuming. Additionally, pharmacists indicated that such interventions tended to upset patients and physicians and pharmacists feared that to initiate such an intervention would create the risk of patients going to other pharmacies.

Myers and Stauffer also discussed the participation of incentive programs with certain chain pharmacy organizations. Although we encountered a reluctance to disclose the details of proprietary contractual agreements, we did get an impression that for most chain pharmacies the total revenue associated with

incentive programs was either non-existent or very small compared to traditional payments for pharmacy services.

Although this survey should be considered to be non-scientific, it does give an indication that that the overall payment rates from commercial third-party pharmacy plans would not be dramatically altered by the inclusion of an allowance for various incentive fees.

Medi-Cal Prescription Reimbursement Rates for Medicare Eligible Recipients

One unique aspect of the Medi-Cal pharmacy program relates to the extension of Medi-Cal prescription reimbursement rates to Medicare eligible recipients who lack any insurance with prescription drug coverage. This extension was required by Senate Bill 393 which mandates that pharmacies provide Medi-Cal prices for Medicare eligible recipients as a condition of Medi-Cal participation. In practice, a pharmacy determines the Medi-Cal reimbursement rate via claims transmission protocols, and is able to pass on a nominal charge to cover electronic transmission costs.

Via informal surveying at pharmacies visited during the field examination process, Myers and Stauffer determined that prescriptions filled under this program constituted a very small (typically between 2% and 5%) component of total volume[18]. In the aggregate, implementation of this program has caused a reduction in the prescription revenue that pharmacies would have otherwise experienced since pharmacy "usual and customary charges" to cash payers are typically higher than the Medi-Cal pharmacy reimbursement rates. However conclusions relating to the overall adequacy of Medi-Cal pharmacy reimbursement rates for this Medicare eligible population substantially mirror those relating to the adequacy of Medi-Cal pharmacy rates for the core group of Medi-Cal recipients.

The future of this drug discount program may be closely tied to various efforts at a federal level to establish some sort of Medicare prescription drug program. Although an expansion of Medicare to provide a substantial drug benefit appears to continue to have some significant political obstacles, there have been attempts by CMS to establish a prescription drug discount card for Medicare beneficiaries that lack other forms of prescription drug coverage.[19] It is unknown at this time how prescription drug discounts that may eventually be offered under the Medicare drug discount card program will compare to discounts that are obtained under the discount program made available through Medi-Cal.

[18] Myers and Stauffer collected data from pharmacies regarding the provision of Medi-Cal rates to Medicare beneficiaries prior to press releases from the California HealthCare Foundation relating to a study of this program performed by RAND. This study cited concerns about whether Medicare beneficiaries were being informed by pharmacies of the availability of the program.

[19] The most recent proposed rule for the Medicare-Endorsed Prescription Drug Card Assistance Initiative was published in the Federal Register on March 6, 2002.

Another recent trend in drug discounting is the advent of drug discount cards issued by several pharmaceutical manufacturers. The majority of these programs are in a very early stage and details of the programs are sketchy, however they tend to claim discounts of 20% or more for specific drug products. Although these programs tend to target low-income senior citizens without third-party prescription coverage, there has been some variability in the exact demographics of the eligible populations. The advent of these discount programs could also have an impact on the extent to which California seniors seek the Medi-Cal discount in the future.

Conclusions

Based on the prescription charges survey, it appears that other third party payers are reimbursing for pharmaceuticals at rates typically less than those paid by Medi-Cal. Additionally, third party payers (excluding Medi-Cal) are not allowing for any margin in their dispensing fees. In fact, dispensing fees paid by most third party payers are set at levels well below the dispensing cost of most pharmacies. Margins are still realized on most third party prescriptions, however, due to the level of ingredient reimbursement.

Chapter 5

Evaluation of the Adequacy of Medi-Cal Pharmacy Reimbursement Rates

A primary purpose of the study of Medi-Cal pharmacy reimbursement rates was to draw some conclusions regarding the adequacy of the rates. The adequacy or inadequacy of reimbursement rates can be quantified in several ways:

- An analysis of issues related to the accessibility of pharmaceutical services for Medi-Cal recipients (evidence that accessibility to pharmaceutical services is significantly impaired could be an indication of inadequate rates).
- A comparison of reimbursement rates with the overall cost (both dispensing and acquisition) incurred by pharmacies to fill prescriptions.
- A comparison of Medi-Cal pharmacy reimbursement rates with market factors including the reimbursement rates accepted for other payers of pharmaceutical services.

This chapter of the report looks at these issues and draws conclusions related to the overall adequacy of Medi-Cal pharmacy reimbursement rates.

Analysis of Medi-Cal Pharmacy Participation Rates

Under federal law, the Department of Health Services has a responsibility to ensure Medicaid recipients have adequate access to pharmaceutical services. Federal statute at 42 USC 1396a(a)(30)(A) (and corresponding regulations at 42 CFR 447.204) state that the Medicaid program must "assure that payments are consistent with efficiency, economy, and quality of care and are sufficient to enlist enough providers so that care and services are available under the plan at least to the extent that such care and services are available to the general population in the geographic area."

Historically, a lack of accessibility to pharmaceutical services has not been a significant issue to Medicaid programs in California or other states. In most states, the enrollment rate of pharmacies in the Medicaid program is at levels near 100%.

Myers and Stauffer performed an analysis of the participation rates of California pharmacies in the Medi-Cal pharmacy program. Information on pharmacies participating in the Medi-Cal pharmacy program was obtained from the Department of Health Services. In order to obtain information on the total population of pharmacies in the state of California, Myers and Stauffer purchased a comprehensive database of pharmacies in the state of California compiled by the National Council of Prescription Drug Programs (NCPDP) and marketed by American Medical Information, Inc. Various algorithms were used to match corresponding records in the Medi-Cal and NCPDP databases and statistics were compiled on the participation rates of pharmacies in the Medi-Cal program.

To further verify the findings of this analysis, a representative sample of fifty pharmacies that supposedly did not participate in the Medi-Cal program were contacted via telephone to confirm their status with regards to participation in the Medi-Cal program. Pharmacies that were determined not to be in the Medi-Cal program were questioned regarding the length of time that the pharmacy had not participated in the Medi-Cal program.

Our analysis resulted in the finding that the state of California has approximately 6,100 community pharmacies and approximately 96% of these are enrolled in the Medi-Cal program. A breakdown of these pharmacies by county is included in Exhibit 16 which also includes various statistics relating to the total population and Medi-Cal recipient population. We note that there are three California counties with two or less pharmacies: Alpine, Mariposa, and Sierra.

The phone calls to pharmacies that appeared to not participate in Medi-Cal revealed that a limited number of these pharmacies actually did participate in the Medi-Cal program, but were not identified in the Medi-Cal provider file which had been supplied to Myers and Stauffer (i.e. they may have enrolled in the program subsequent to the data extract supplied to Myers and Stauffer which specifically identified pharmacies with claims volume during calendar year 2000). More significantly, most pharmacies that did not accept Medi-Cal indicated that they had not done so for many years if not since their initial opening date. We did not identify any trend to indicate that a significant number of pharmacies have recently withdrawn from the Medi-Cal pharmacy program.

Federal law does not require compliance with any particular standard of pharmacy accessibility other than aforementioned standard of providing access to the extent that "services are available to the general population in the geographic area." However, Myers and Stauffer also analyzed the accessibility of the Medi-Cal "network" of pharmacies in terms of benchmarking standards commonly used

in the private insurance industry. One commonly applied standard is the "90/10 access ratio" requirement that necessitates that an insurance plan provide access to a pharmacy (or other health care related service) within 10 miles of the residence of at least 90 percent of program participants. Typically, compliance with such ratios can be demonstrated via a zip code level analysis of program participants using some type of mapping software. It is also typical that compliance with such a ratio is demonstrated on a statewide or regional basis with the understanding that some rural areas may have access levels below the "90/10" standard.

Myers and Stauffer obtained a zip code level summary of Medi-Cal participants from the Medical Care Statistics Section of the California Department for Health Services. Using this data along with the zip codes of pharmacies participating in the Medi-Cal pharmacy program, Myers and Stauffer performed an analysis of the typical distance between Medi-Cal recipient residence and pharmacy location.[20] A similar analysis was performed using the total population of the state of California along with the locations of all pharmacies in California.[21]

In Exhibit 17 we have presented the results of this analysis showing the percent of population (both Medi-Cal specific as well as total population) that resides within a specified distance of a pharmacy (in the case of the Medi-Cal population, only Medi-Cal participating pharmacies were considered). Although there are some regional variations, we determined that in the aggregate, 99.4% of the Medi-Cal population lives within 10 miles of a Medi-Cal participating pharmacy. This was almost identical to the access ratio calculated for the total population: 99.2%.[22] It should be noted that the variations in the access ratios between the Medi-Cal and total populations are a result not only of variations in the distributions of pharmacies included in the analysis, but also variations in the distribution of the population.

Access ratios in certain rural counties were somewhat lower than the statewide average. In particular, Alpine, Colusa, Inyo, Lassen, Mariposa and Mono counties had 80% or less of their Medi-Cal population within 10 miles of a Medi-Cal participating pharmacy. The corresponding access ratio for the total population in these counties was similar.

---

[20] Myers and Stauffer used the postal zip code to determine the approximate latitude and longitude of the pharmacy and Medi-Cal residents. A database from the US Census Bureau was used to link the postal zip code with the approximate latitude and longitude. Using the latitude and longitude along with appropriate trigonometric calculations, we determined an estimate of the distance between in-state Medi-Cal participating pharmacy and Medi-Cal recipients. We then determined the minimum distance to a Medi-Cal pharmacy (i.e. the closest pharmacy). This analysis is limited by two factors: 1) the latitude and longitude are approximate based on the postal zip code, and 2) the distances estimated are "as the crow flies" as opposed to driving distances.

[21] Zip code level population data was obtained from the US Census Bureau, 1990 census.

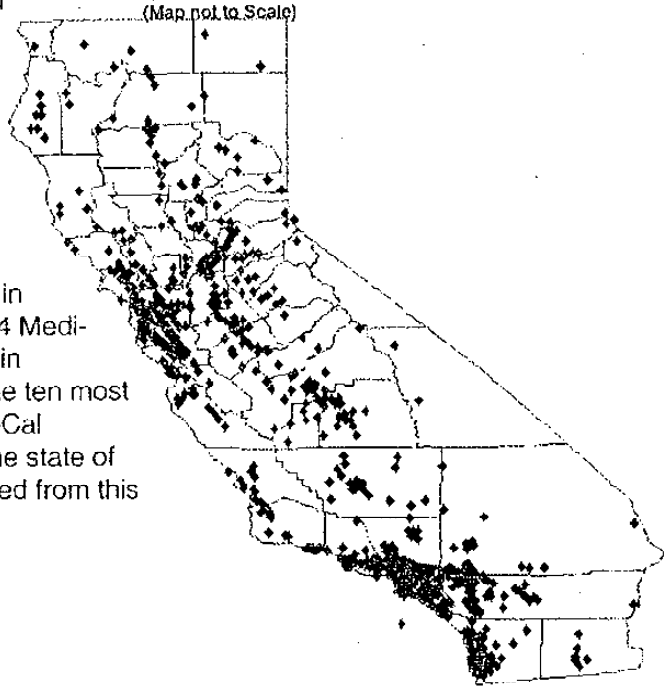
[22] The analysis of the "access ratio" for the total population used the locations for all pharmacies in the state and was therefore the most "conservative" possible analysis. In reality, the private insurance pharmacy networks for many individuals would be likely be more restrictive than Medi-Cal pharmacy accessibility.

Another accessibility issue considered was the geographic dispersion of Medi-Cal participating pharmacies from other Medi-Cal participating pharmacies. Such a consideration could be important in order to consider the impact on access that may be caused should certain pharmacies currently participating in the Medi-Cal pharmacy program decide in the future to discontinue participation. This analysis gives an idea as to how travel distance to obtain pharmaceutical services could possibly be impacted by changes in pharmacy participation rates.

Myers and Stauffer performed a geographical analysis of the dispersion of California pharmacies using the postal zip code as the basis for determining the pharmacies' location relative to one another (see Chart 5.1).[23] The vast majority of pharmacies (over 99%) were located within ten miles of the next closest participating pharmacy. This result is not surprising since most pharmacies tend to be located in cities and towns and many sizable cities and towns have multiple pharmacies.

We did note some regional instances of geographical isolation particularly in extreme northern California and the Sierra Nevada region of the state. We ascertained that the maximum distance from one Medi-Cal participating pharmacy to the next closest participating pharmacy was approximately 70 miles (the most isolated Medi-Cal pharmacy in California being in Happy Camp, 71 miles from 4 Medi-Cal participating pharmacies in Yreka). Table 5.1 displays the ten most geographically isolated Medi-Cal participating pharmacies in the state of California based as determined from this analysis.

Chart 5.1 Approximate Locations of Medi-Cal Pharmacies
(Map not to Scale)



[23] Myers and Stauffer determined distance between Medi-Cal pharmacies using the latitude and longitude associated with pharmacy zip codes as previously described. To compensate for limitations of the zip code methodology, the distances relating to the thirty most "isolated" pharmacies determined by the zip code analysis were recomputed using a popular Internet based driving directions service (Yahoo! Maps) to estimate driving distances to the next closest city with Medi-Cal participating pharmacies.

Table 5.1 Top Ten Geographically "Isolated" Pharmacies Enrolled in the Medi-Cal Program

City (County) of "Isolated" Pharmacy	Next Closest City (County)	Miles to Next Closest City (Per Driving Directions)	Number of Medi-Cal Pharmacies in Next Closest City
Happy Camp (Siskiyou)	Yreka (Siskiyou)	71	4
Tulelake (Siskiyou)	Alturas (Modoc)	69[A]	3
Lone Pine (Inyo)	Bishop (Inyo)	60	3
Borrego Springs (San Diego)	Julian (San Diego)	35	1
Hayfork (Trinity)	Weaverville (Trinity)	31	4
Avalon (Los Angeles)	San Pedro (Los Angeles)	30[B]	15
Etna (Siskiyou)	Yreka (Siskiyou)	29	4
Groveland (Tuolumne)	Sonora (Tuolumne)	27	11
Prather (Fresno)	Clovis (Fresno)	26	11
Brownsville (Yuba)	Oroville (Butte)	24	9

[A] The analysis was limited to pharmacies physically located in California. It is worth noting that Tulelake is about 28 miles from Klamath Falls, Oregon which has two Medi-Cal participating pharmacies.
[B] Avalon is located on Santa Catalina Island and there is no road access to the mainland. Ferry service is available to various locations on the mainland in Los Angeles and Orange counties.

These various analyses lead us to conclude that there are not significant concerns with regards to the accessibility of pharmaceutical services to Medi-Cal recipients related to pharmacy participation rates and geographic proximity of Medi-Cal participating pharmacies.

Analysis of Typical Margins on Medi-Cal Prescriptions

Myers and Stauffer used the findings of the dispensing and acquisition cost studies as well as drug utilization statistics to construct a model of the typical margins, or profits, that pharmacies realize on Medi-Cal prescriptions. The results of this model are presented in Table 5.2.

As shown in Table 5.2, the current levels of Medi-Cal pharmacy reimbursement result in positive margins for nearly all types of drug products classified. Margins are markedly lower for products paid with a Direct Price, and in the case of multi-source products paid with a Direct Price, there was a slightly negative margin (i.e. on the average, these types of prescriptions are filled at a slight loss or breakeven amounts). It is significant to note that although the current Medi-Cal pharmacy dispensing fee is less than the typical cost of dispensing observed in the dispensing cost study, the shortfall on dispensing fee reimbursement is more than adequately compensated via a generous allowance for ingredient costs. The net result of the current Medi-Cal pharmacy reimbursement rate is a profit of $6.67, or 11% per prescription.